

DOCKET NO.: UBCV-0004  
Application No.: 09/189,415  
Office Action Dated: November 8, 2005

PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116

**Amendments to the Specification:**

Please insert the amended Sequence Listing being filed concurrently herewith into the specification.

Please amend the paragraph at page 5, lines 26 through 29, as follows:

--FIG. 6A-B shows the nucleotide sequence (SEQ ID NO:10) (SEQ ID NO:13) and predicted protein (SEQ ID NO:11) (SEQ ID NO:14) of tir (A) and genetic map (C). In FIG. 6B, two putative membrane spanning domains are underlined, and the 6 tyrosine residues are shaded. In FIG. 6B, the location of tir in Locus of Enterocyte Effacement (LEE) and the gene deletion strategy are diagramed.--

Please amend the paragraph at page 7, lines 27 and 28, as follows:

--FIG. 9A-B shows the sequence similarity between Tir polypeptides form EPEC (SEQ ID NO:10), EHEC (SEQ ID NO:11) and RDEC-1 (SEQ ID NO:14) (SEQ ID NO:12).

Please amend the paragraph at 49, lines 16 through 28, as follows:

--RDEC-1 (SEQ ID NO:5, nucleotide; (SEQ ID NO:12), polypeptide) and its *espA* and *espB* mutant strains were inoculated by the orogastric route into young rabbits. Most RDEC-1 was found in the cecum and colon one week postinfection. However, the number of either mutant strain was greatly ~~deereases~~ decreased in these tissues compared to the parent strain. RDEC-1 adhered specifically to the sacculus rotundas (follicle associated epithelium) and bacterial colonization was also observed in the cecum, indicating that the sacculus rotundas in the cecum is an important colonization site for this pathogen. The adherence levels of the ESpA<sup>-</sup> and ESpB<sup>-</sup> strains to the sacculus rotundas were 70 and 8000 times less than that of parent strain. These results show that the adherence ability and tissue tropism of RDEC-1 are dependent on the two Esp secreted proteins. Furthermore, EspB appears to play a more critical role than EspA in bacterial colonization and pathogenesis. This is the first demonstration that the enteropathogenic *E. coli* secreted proteins, EspA and EspB, which are

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involved in triggering of host cell signal transduction pathways, are also needed for colonization and virulence.--